

Standard Operating Procedures

Anyone who plans to work in any of EHE laboratories must follow the following guidelines.

Personal Apparel and Personal Protection:

Loose clothing and long hair must be neatly confined. All shoes must be of the “close-toes” types. Sandals are considered “open-toes” shoes and are not allowed in the lab. Please wear long pants in the laboratory, shorts are not permitted.

Eyes protection is a must when working in the lab. Safety glass with side shields is to be worn at all time. Do not work with any chemical without eye protection.

Lab coat must be worn at all time. They are available in the lab and in the hallway coat hanger. Lab coats are collected for cleaning periodically by the contractor. When your coat is dirty, please deposit it in the area next to the hanger for cleaning.

When working with potential high reactive chemicals, a face shield must be used.

Use appropriate gloves to avoid direct skin contact with lab chemicals. Make sure the gloves are new before using them. Change them periodically if needed.

Use Your Common Sense:

No mouth pipetting.

No horseplay in the lab.

No eating or drinking in the lab.

No smoking in the lab.

No cosmetics application in the lab.

Glassware Usage:

Avoid using damaged glassware.

Be extra careful when using vacuum glass apparatus such as Dewar flasks and other potential implosive glassware. Make sure they can withstand the vacuum before using them. When possible, wrap materials such as parafilm around them. This will minimize glass flying in case of implosion. The same care must be observed when pressure is applied to glassware. Do not use any glassware unless you know its pressure capability.

Working Alone In the Lab:

Avoid working in the lab when there is no one around. Make sure your colleagues know you are working alone. Ask them to check with you periodically.

Unattended Experiments:

It is not a “good laboratory practice” to leave an experiment unattended. However, if this is necessary, make sure there are automatic shut down controls to prevent fires or explosions. To prevent accident, place appropriate signs on or next to the experiment. The signs should have procedures for shutting the experiment down.

Emergency Eyewash and Shower:

Each laboratory has an eyewash and emergency shower station. You must know exactly where these emergency stations are. Take time to locate these emergency stations. In an emergency, you will not have time to look for them.

When use the emergency eye washing, make sure you continues washing your eyes for at least ten minutes or until all chemicals are clear from your eyes.

The same goes for emergency showering, do not turn the shower off prematurely, you must rinse the chemicals completely off your body.

Disposal of Chemicals and Other Lab Materials:

It is your duty to dispose chemicals and other waste materials properly. Dispose broken glasses in the broken glass bin; do not put them in the trash containers. All chemicals must be disposed according to their types. Do not put any chemical in the sink. Reactive chemicals used in research project must be disposed in separate containers. Each container must be labeled with the name of the chemical and the concentration (if possible).

Store waste chemicals in appropriate containers. If you have any question about chemical and method of disposal, call Health Safety & Environment office at 410-516-8798 or 410-955-5918.

To schedule a waste pickup, go to this website and fill out a form:

<https://orchid.hosts.jhmi.edu/hse/webtools/wasteform/>

You can also drop off your chemicals at Macaulay Hall, in the Basement. The drop off schedule is Thursday 10:30-11am and 1-2PM.

Biological Materials:

All biological waste materials are considered “Biohazard” and must be disposed in the red containers marked “Biohazard”.

Working With Flammable Materials and Hot Materials:

When you are working with flammable chemicals, you must make sure there is no sources of ignition nearby, that can cause a fire. Hot plates are considered a potential ignition source and must be used with extreme care, particularly when flammable materials are present. You should only store your flammable chemicals in flammable cabinets.

Use appropriate tools such as tongs when working with heated glasses and metals. These materials usually remain hot for a long period of time. Do not pick them up with your bare hands, unless you know for sure they are cooled.

Chemical Spill and Emergencies

In a **Major chemical spill**, (when you need help from emergency personnel) take the following actions:

Evacuate everyone in the lab to a safe location, far from the area.

Account for all laboratory workers.

Call 911 for emergency assistance. If it is safe to do, turn off all sources of ignition, then leave the area.

Notify the lab manager – Huan Luong (cell phone: 206-271-6592).

In a **Minor chemical spill**, (where you know you can handle it safely) take the following actions:

Notify all the people in the lab, and clear the area.

Identify the spilled material.

Notify Huan Luong at 206-271-6592, and let him clean up the spill.

In a **Fire Emergency**, take the following actions:

Immediately notify everyone in the lab, and evacuate the lab.

Pull the fire alarm switch in the hallway or call 911.

In case of a very small fire, use the fire extinguisher (only if you are trained).

If you are not sure, do not try to go back into the room, wait for professional help to arrive.

Notify Huan Luong at 206-271-6592.

In a **Medical Emergency**, take the following action:

If someone in the lab is injured, immediately call 911 for help. Do not wait!

If someone has symptoms of overexposure of a chemical, move her/ him out of the lab and call 911 right away. Immediately get the person to fresh air area.

In case of chemical contact of skin, flush the area with water for about 15 minutes. Do not hesitate to use the safety shower when needed.

In case someone ingests a chemical, call 911. Drink large amount of water. Do not induce vomiting.

Chemical Storage:

All new chemical shipments must be delivered to the lab manager. He will label each chemical and record all information into the database, and he will deliver each chemical to the person who ordered it.

When a chemical container is empty, give it to the lab manager. He will update the chemical database and reorder it if needed. Do not throw any empty container in the trash.

DONOT STORE ANY CHEMICAL IN THE FUME HOOD!

Store all flammable chemicals in the flammable storage cabinets. If you have to store chemicals in a refrigerator, use the flammable storage refrigerator only. Don't store flammable chemicals in regular refrigerator; the automatic on/off switch inside the refrigerator is considered an ignition source.

Store all corrosive chemicals in corrosive cabinets.

Do not store glassware or chemicals on shelves above work area, including the sink area. Do not leave chemicals on the floor unless they are in containers, ready for shipment.

Material Safety Data Sheet (MSDS):

Each chemical in the lab has a material safety data sheet (MSDS). This is where you can find information about the physical and health hazards of that chemical. All MSDS sheets are kept in folders in the lab. If you are not sure about certain chemical, read the MSDS sheet.